

CANDIDATE AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: Castilleja christii

COMMON NAME: Christ's paintbrush

LEAD REGION: 1

INFORMATION CURRENT AS OF: April, 2002

STATUS/ACTION (Check all that apply):

☐ New candidate

☒ Continuing candidate

☐ Non-petitioned

☒ Petitioned - Date petition received: September 28, 1999

90-day positive - FR date: ☐

12-month warranted but precluded - FR date: ☐

☐ Is the petition requesting a reclassification of a listed species?

☐ Listing priority change

Former LP: ☐

New LP: ☐

Latest Date species first became a Candidate:

☐ Candidate removal: Former LP: ☐ (Check only one reason)

☐ A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

☐ F - Range is no longer a U.S. territory.

☐ M - Taxon mistakenly included in past notice of review.

☐ N - Taxon may not meet the Act's definition of "species."

☐ X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Scrophulariaceae (Figwort family)

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Idaho

CURRENT STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Idaho

LEAD REGION CONTACT: Wendi Weber 503-231-6131

LEAD FIELD OFFICE CONTACT: Snake River Basin Office, Steve Duke 208-378-5259

BIOLOGICAL INFORMATION: Castilleja christii was first collected by John Christ in 1950, although it was not recognized as a new species until 1973. Castilleja christii is endemic to subalpine meadow and sagebrush habitats in the upper elevations of the Albion Mountains, Cassia County, Idaho. The single population of this species, which covers only 81 hectares (200 acres), is restricted to the summit of Mount Harrison. It was initially thought to consist of approximately 10,000 individuals (Moseley and Hudak 1994). However, recent estimates suggest that the actual population size may be much larger, possibly over 100,000 individuals (Moseley 1996). The population appears to be stable (Moseley 1998), although the species is threatened by a variety of activities (described below). We recently contracted with the Idaho Department of Fish and Game's Conservation Data Center to re-survey the C. christii population in 2002 using the same methods used in previous surveys in 1996, 1997 and 2000. The results of this survey should provide us with information on possible impacts from activities that may have affected the population since the last survey effort.

Castilleja christii occurs primarily on gentle, northerly-facing slopes. It is found in three distinct communities: snowbed, graminoid, and sagebrush/grassland habitat. Associated species include Artemisia tridentata ssp. vaseyana, Festuca idahoensis, Solidago multiradiata, Aster foliaceus, Agropyron caninum, and Elymus trachycaulus. The density of C. christii is inversely related to the density of sagebrush; it generally only occurs in openings between shrubs (Moseley and Hudak 1994; Moseley 1996).

The habitat at Mount Harrison is bisected by several roads, and contains existing development and associated infrastructure, including a U.S. Forest Service (Forest Service) fire lookout station, powerlines, and radio and satellite tracking stations. Due to its accessibility and scenic location, Mount Harrison is subject to a high degree of year-round recreational use. Threats are summarized below.

THREATS:

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

Although the Forest Service restricts vehicle traffic to established roads, frequent unauthorized off-road vehicle use occurs and has impacted the C. christii population. Several unimproved roads, which are used to access hang-glider launch sites, go through the C. christii population. The greatest direct threat to habitat occupied by this species is from vehicles that leave the existing roads, e.g., to get around snowdrifts on the main road to the summit and fire lookout (Moseley and Hudak 1994). This results in erosion of the plant's habitat and mortality of individuals.

The main road to the summit, Howell Canyon Road, was paved in 1998. Since this road goes right through the C. christii population, some plants were directly impacted by construction or staging activities (Christine Frisbie, Boise-Sawtooth National Forest, pers. comm., 1998). Although the direct impacts to the species associated with the paving appear to be relatively

minor, indirect impacts (such as altered drainage patterns, etc.) have not been quantified. Road maintenance activities could also potentially impact this species.

B. Overutilization for commercial, recreational, scientific, or educational purposes.

Not known to be a factor at this time.

C. Disease or predation.

The summit of Mount Harrison, including habitat occupied by C. christii, was previously assumed to be closed to livestock grazing; therefore, grazing was not considered to be a significant threat to the species (Service 1995). However, livestock grazing in habitat occupied by C. christii occurred during the active growing season in 1999 (Forest Service, in litt. 1999). The summit area is not completely fenced from grazing, and three cattle allotments, with a total of more than 1,750 animals, surround Mount Harrison. Trampling of plants and cattle sign (hoofprints and scat) were noted within C. christii habitat by Sawtooth National Forest staff (Forest Service, in litt. 1999). Livestock grazing can adversely affect C. christii by trampling and/or consuming plants resulting in reduced reproductive success. Livestock grazing did not occur within C. christii habitat in 2000 (Forest Service, in litt. 2000).

D. The inadequacy of existing regulatory mechanisms.

To date, existing regulatory mechanisms (i.e., Conservation Agreement) have been only partially effective at controlling activities that are impacting C. christii habitat such as unauthorized off-road vehicle use, hang-gliding, and livestock grazing. For example, although the Forest Service lookout at the summit of Mount Harrison is staffed by a seasonal volunteer, there has been little on-the-ground enforcement efforts to control off-road vehicle use by Forest Service staff. However, barriers were installed in some areas along Howell's Canyon Road to help reduce off-road vehicle traffic within the C. christii population.

E. Other natural or manmade factors affecting its continued existence.

Although there is no designated trailhead at the summit, hikers park at or near the lookout and walk through habitat occupied by C. christii. Such use can impact this species through trampling of plants. Fencing or signs to restrict hikers or vehicles to existing roads or trails are lacking in some areas. Snowmobilers frequent the area, which is accessible from a designated winter parking area located a few miles from the summit of Mount Harrison. Because winter use has not been monitored, it is not known if this activity is impacting habitat for this species. In addition, because it exists in only one location and is vulnerable to human impacts, C. christii is extremely vulnerable to stochastic extinction (Moseley and Hudak 1994).

BRIEF SUMMARY OF REASONS FOR REMOVAL OR LISTING PRIORITY CHANGE:

FOR RECYCLED PETITIONS:

- a. Is listing still warranted?
- b. To date, has publication of a proposal to list been precluded by other higher priority listing actions?
- c. Is a proposal to list the species as threatened or endangered in preparation?
- d. If the answer to c. above is no, provide an explanation of why the action is still precluded.

LANDOWNERSHIP: The single population of C. christii occurs on land managed by the Sawtooth National Forest (Burley District).

PRELISTING: A Conservation Agreement (CA) between the Sawtooth National Forest and the Service was completed in 1995 and expired in September 2000. This CA focused on actions necessary to protect habitat for C. christii and to stabilize the species' population. The actions in the CA were not fully implemented. For example, fencing to control livestock access to the summit was not completed. However, the Forest Service has taken steps to reduce threats to this species, including conducting project-related surveys and installing barriers to discourage off-road vehicle use in some areas, and continues to monitor the C. christii population. The effects of increased recreational use (e.g., trampling by hikers and off-road vehicle use) associated with paving Howell's Canyon Road continue to be evaluated.

The Service is working with the Forest Service to revise the expired CA and to determine its effectiveness in reducing threats to C. christii. By fully implementing the CA, (i.e., increasing education and enforcement efforts, installing and maintaining signs and fencing, effectively closing the summit to livestock grazing, etc.), we expect that the majority of threats associated with human activities will be controlled.

Approximately 23 percent of the C. christii population occurs in the Mount Harrison Research Natural Area (RNA) (Moseley and Hudak 1994). The RNA is located to the east of, and directly adjacent to, the existing access road that leads to the summit of Mount Harrison. The majority of the C. christii population occurs immediately west of the road. This area was not included in the RNA because the presence of roads and structures is not considered to be compatible with the goals or management of an RNA. The Forest Service is hoping to expand the RNA to include more of the C. christii population in the future (C. Frisbee, pers. comm., 2000).

REFERENCES:

Moseley, R.K. 1996. Christ's Indian paintbrush (Castilleja christii) monitoring on the Sawtooth National Forest: transect establishment and baseline data. Prepared by the Idaho Department of Fish and Game for the Sawtooth National Forest.

Moseley, R.K. 1998. Christ's paintbrush monitoring on the Sawtooth National Forest: third-year results. Prepared by the Department of Fish and Game for the Sawtooth National Forest.

Moseley, R. and H. Hudak. 1994. Conservation strategy for Castilleja christii (Christ's Indian paintbrush). Prepared by the Idaho Department of Fish and Game and the Sawtooth National Forest for the Idaho Department of Parks and Recreation.

U.S. Fish and Wildlife Service. 1995. Conservation agreement for Castilleja christii. Prepared by the Snake River Basin Office, and signed by the Service and the Sawtooth National Forest (dated 9/25/95).

LISTING PRIORITY:

Threat			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11*
		Subspecies/population	12

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, removal of candidates, and listing priority changes.

Approve: Don Weathers April 1, 2002,
Acting Regional Director, Fish and Wildlife Service Date

Concur: Steve Williams June 3, 2002
Director, Fish and Wildlife Service Date

Do not concur: _____
Director, Fish and Wildlife Service Date

Director's Remarks: _____

Date of annual review: 1-25-02
Conducted by: Stephen D. Duke

Comments: _____

